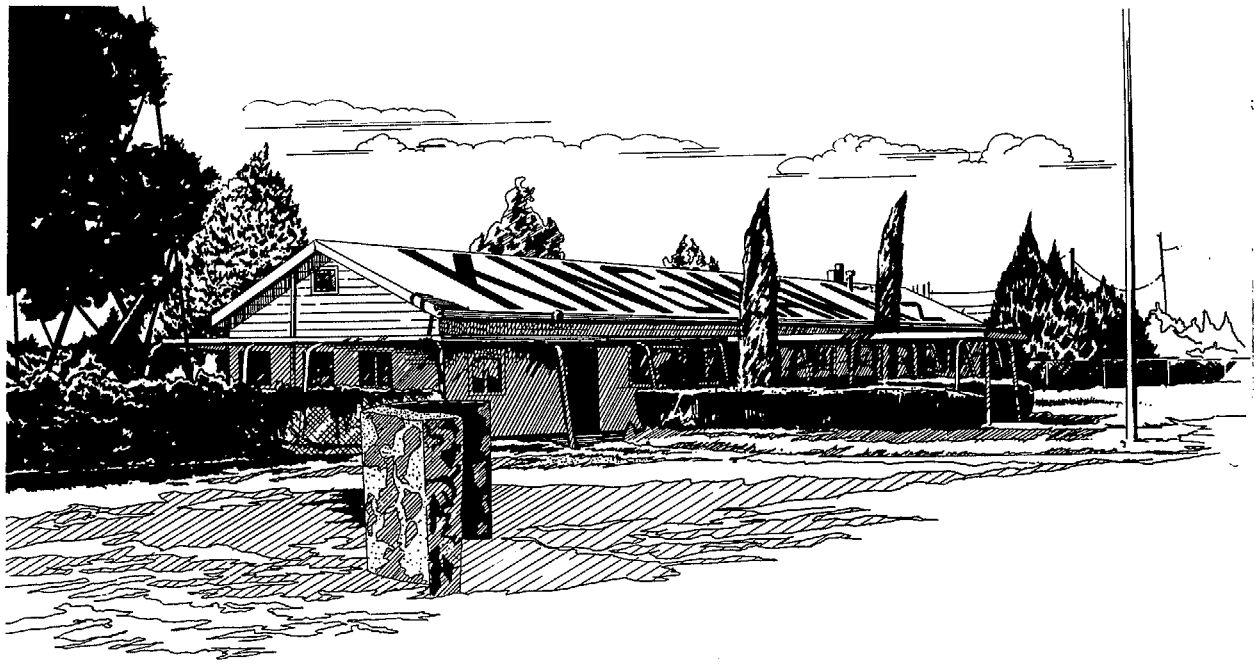
CHAPTER ONE
INVENTORY



Chapter One
INVENTORY

AIRPORT SETTING

The Kingman Airport and the adjacent Kingman Airport Industrial Park are located in a currently unincorporated portion of Mohave County, approximately four miles to the east, northeast of the City of Kingman, Arizona. The airport is situated adjacent to and southeast of State Route 66 and the Atchison Topeka and Sante Fe Railroad. The airfield and the industrial park are located within Sections 24, 25, 26, 35 and 36, of Township 22 North, Range 16 West, Gila and Salt River Meridian **(Exhibit 1A)**.

The City of Kingman is located at the junction of Interstate 40, U.S. Route 93, State Route 66 and State Route 68. As with the Airport, the City of Kingman is situated along the main transcontinental route of the Santa Fe Railroad. Kingman was incorporated as a city in 1952 and has served as the Mohave County Seat since 1887.

Kingman is a regional trade, service and distribution center for northwestern Arizona. It is located 101 highway miles from Las Vegas, 170 miles from the Grand Canyon, 186 miles from Phoenix, 297 miles from Tucson, 330 miles from Los Angeles, and 400 miles from San Diego. It is situated in close proximity to the state borders of California and Nevada, and due to its strategic location, tourism and manufacturing have become leading industries. The Kingman area is a prime location for industries, due to favorable Arizona taxes, Interstate Highway 40, the Santa Fe mainline and proximity to the California market.

Kingman is built on gently sloping topography between the Hualapai and Cerbat Mountains. Recreational and scenic attractions within Mohave County contribute to the number of visitors to Kingman. Two of the more significant attractions within the region are Laughlin, Nevada, a gaming community; and

the Colorado River. In addition, the mountains surrounding Kingman offer hiking, picnicking, and camping, and the community has preserved a number of historic attractions.

Mohave County, located in the northwest corner of the State, is adjacent to the states of California, Nevada and Utah on its western and northern border, and is bordered by the Arizona counties of Coconino, Yavapai and La Paz, to the east and south.

CLIMATE AND WEATHER

Weather conditions play an important role in the planning and development of an airport. Temperature is critical in determining runway length requirements, while wind speed and direction determine optimum runway orientation. The percent of time visibility is impaired due to cloud coverage is a major factor in determining the need for navigational aids and lighting.

Precipitation in the Kingman area averages approximately 9.65 inches per year, with higher monthly totals in both the winter and summer months. Based upon a 30 year average, yearly snowfall averages 2.5 inches, with the majority occurring in January.

Normally, July is the hottest month with a mean daily maximum of 97.1 degrees fahrenheit. The average annual high temperature is 75.4 degrees, while the average annual low is 47.9 degrees. The mean relative humidity is 39 percent at 6:00 a.m. and 27 percent at 6:00 p.m.

Winds in the Kingman area are normally mild to moderate with periods of higher velocity gusts. Relatively mild winds of 15 miles per hour or less occur 78.8 percent of the time, and moderate winds of 15 to 30 miles per hour occur approximately 21.2 percent of the time. Seasonal periods with relatively higher wind velocities are more common during the summer monsoon season.

Unfortunately, some of the historical weather data available for the airport and the Kingman area, such as those for wind, have not been organized or summarized, and some were based on very low numbers of observations per day. The wind data that were considered to be the best for the master plan weather analysis covered a two year period, 1968 and 1969, when wind observations were taken approximately 15 times a day. By compiling these data, a windrose for the Kingman Airport was prepared (**Exhibit 1B**). The windrose indicates wind speed and direction by the use of concentric circles. Total percentage of wind coverage by any given runway can be determined from this chart.

AIRPORT DEVELOPMENT HISTORY

Scheduled airline passenger service was established in the Kingman area in the 1930's by Western Air Express and Transcontinental Air Transport (TAT). Both airline companies built their own airfields in Kingman, with Western Air Express completing their field first and naming it Berry Field. Port Kingman was built second by TAT and dedicated to the town of Kingman. Charles Lindberg piloted the first TAT flight into Kingman, Arizona. Western Air and TAT eventually merged, forming what is now Trans World Airlines (TWA) and Berry Field was closed.

At the beginning of World War II (1941), the United States Army established a flexible gunnery school at the site of the present Kingman Airport. This site, encompassed the existing runway layout, several taxiways, aircraft parking apron, hangars, a drainage system and streets for internal circulation. Port Kingman was closed due to conflicting traffic patterns between the two airports.

Following the war, the military airfield was selected as a military aircraft surplus field.

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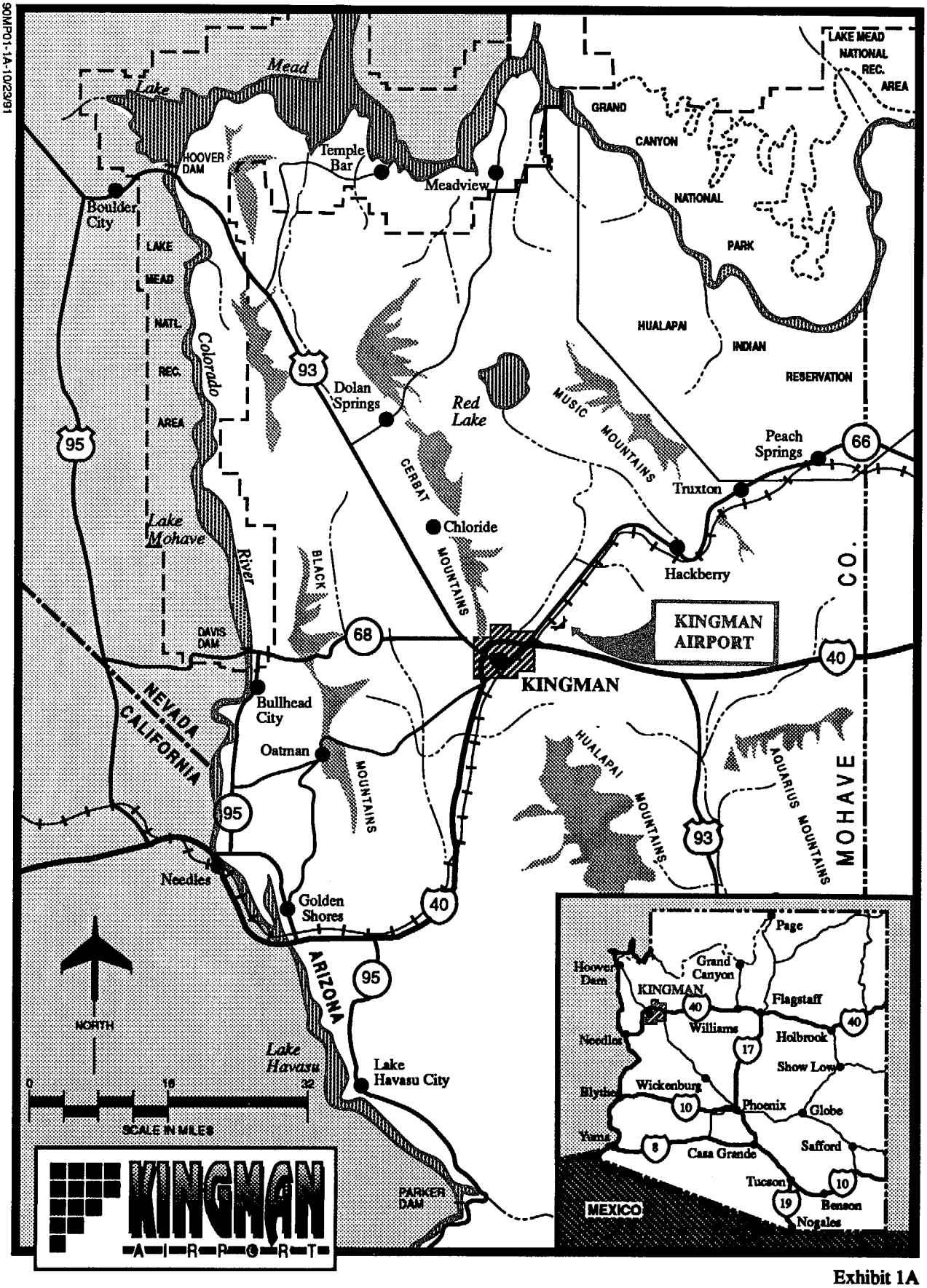

KINGMAN AIRPORT

Exhibit 1A
VICINITY MAP

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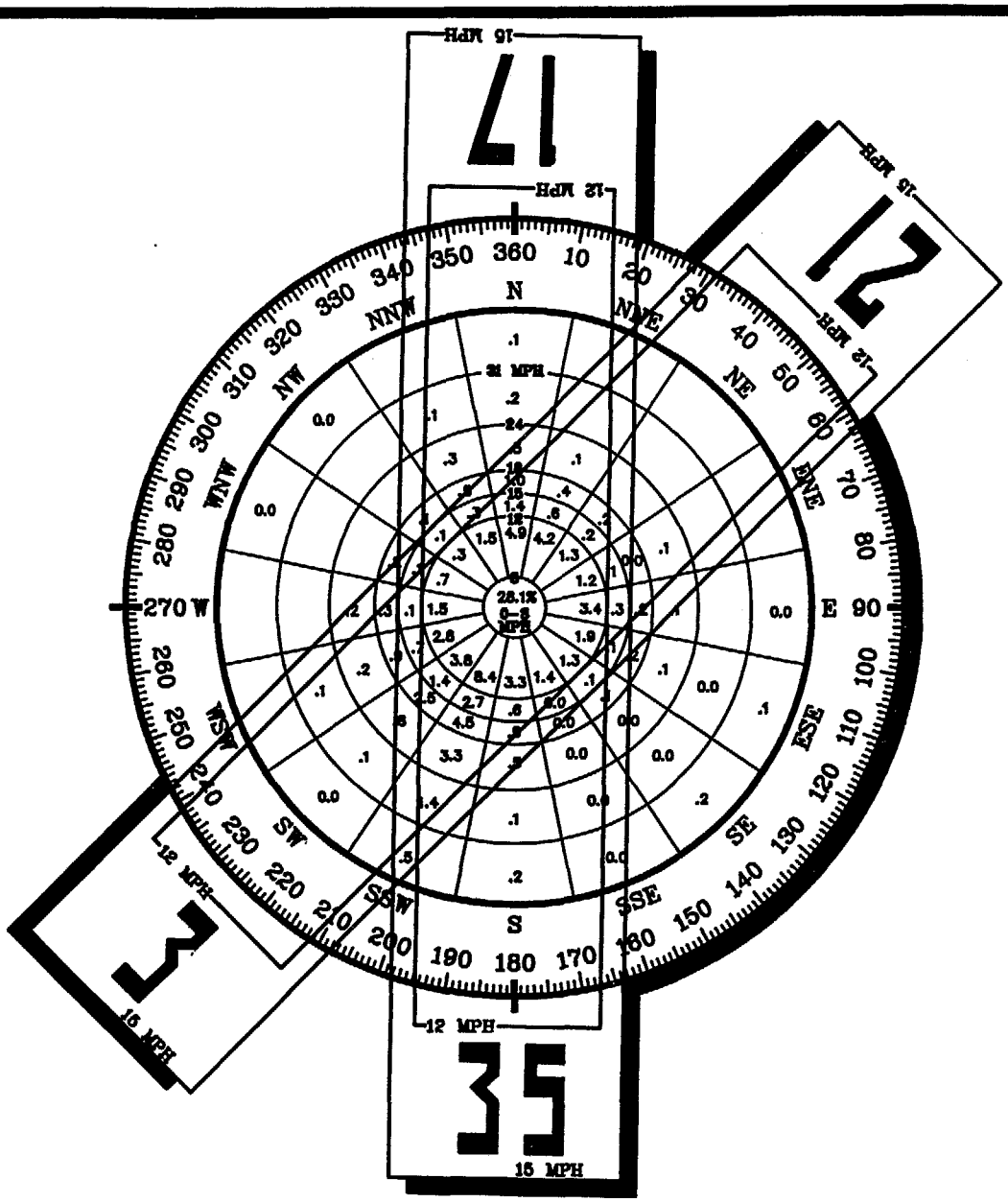

SOURCE:
NOAA National Climatic Center
Asheville, N.C.

DATA STATION:
Kingman Airport
Kingman, Arizona

OBSERVATIONS:
9,575 Observations
Jan. 1968 – Dec, 1969
(Note: Observations from 6:00 am to 9:00/10:00 pm)

WIND COVERAGE		
	12 MPH	15 MPH
Runway 03–21	*95.5%*	*97.6%*
Runway 17–35	*89.3%*	*95.1%*
Runway 07–25	*Closed*	*Closed*
All Runways	*98.6%*	*99.3%*

KINGMAN AIRPORT

Exhibit 1B
WINDROSE

Storing approximately 7,000 aircraft, it became one of the largest military aircraft supply fields in the country. People from all over the country traveled to Kingman to examine and purchase surplus aircraft.

On August 3, 1948, the Army Airfield of Kingman was conveyed to Mohave County through a Surplus Property Agreement under Public Law 289. This was one of the programs initiated throughout the country, which permitted a number of military airfields to be acquired by local sponsors for non-military aviation uses.

Several improvements have been made on the airport since acquisition after World War II. During 1950, a rotating beacon was installed at the airport. During 1957, runway lights were installed on Runway 03-21 and the wind sock and segmented circle were lighted. During 1975, Runway 03-21 and its parallel taxiway were overlayed, and the runway lighting was reconstructed. VASI was also installed on both ends of Runway 03-21 during this period. In 1987, a sealcoat was applied to Runway 03-21, and Runway 17-35 and two taxiways were reconstructed. In 1990, runway lights and Precision Approach Path Indicators (PAPI) were installed on Runway 17-35.

In 1979, Mohave County obtained a deed release from the FAA allowing a portion of the airport property to be sold and developed as an industrial park. The Mohave County Airport Authority was also established in 1979 as an independent agency to operate the Kingman and Bullhead City Airports. In 1988, Mohave County sold the property to the City of Kingman. Previously named Mohave County Airport, in 1984 the airport name was changed to Kingman Airport.

EXISTING AIRPORT FACILITIES

Airfield facilities at Kingman Airport include runways, taxiways, airfield lighting and navigational aids. **Exhibit 1C** illustrates the existing facilities which are described in the following paragraphs.

RUNWAYS

Kingman Airport, at an elevation of 3,446 feet above mean sea level, currently has two active runways and one runway that was officially closed in 1984. The primary runway is oriented northeast to southwest and is designated Runway 03-21. This runway is 6,831 feet in length, 150 feet in width, and is constructed of asphaltic concrete. Based on a National Oceanic and Atmospheric **Airport/Facility Directory**, this runway has a rated pavement strength of 45,000 pounds single wheel loading (SWL) and 85,000 pounds dual wheel loading (DWL) and 125,000 pounds dual tandem (DTWL) wheel loading. The effective runway gradient is 0.25 percent sloping to the northeast.

The second runway in operation at the Kingman Airport is oriented north to south, designated as Runway 17-35, and constructed of asphaltic concrete. This runway serves as the crosswind runway. It is 6,724 feet in length and 75 feet in width. Based on the previously referenced facility directory, Runway 17-35 has a rated pavement strength of 22,000 pounds SWL and 60,000 pounds DWL. The effective runway gradient is 1.30 percent sloping to the north.

The third runway, which has been officially closed, is oriented east to west and was designated as Runway 07-25. It is 6,725

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NORTH

0 1600 3200

SCALE IN FEET

INDUSTRIAL

PARK

Shipping Lane

Industrial Parkway Blvd.

State Route 66

Atchison Topeka & Santa Fe Railroad

Industrial Way

Interstate Way

Mohave Airport Dr.

Finance Way

Olympic Dr.

Santa Fe Dr.

Flightline Dr.

Runway Protection Zone (RPZ)

Runway Protection Zone (RPZ)

PAPI

VASI

*VOR/DME

AIRPORT PROPERTY LINE

*BEACON

*FUEL ISLAND

TERMINAL

6831' x 150'

6724' x 75'

485'

PAPI

VASI

SEGMENTED CIRCLE

Runway Protection Zone (RPZ)

Runway Protection Zone (RPZ)

To KINGMAN (4 miles)

22 | 23 / 27 | 26

24 / 25

20 / 26

24 | 19 / 25 | 30

28 | 27 / 33 | 34

27 | 26 / 34 | 35

25 | 30 / 36 | 31

33 | 34 / 4 | 3

34 | 35 / 4 | 2

35 | 36 / 2 | 1

36 | 31 / 1 | 6

KINGMAN AIRPORT

Exhibit 1C
EXISTING FACILITIES

feet in length and 150 feet in width. Since Runway 07-25 is officially closed, FAA does not maintain records on the pavement strength. Based on the existing Airport Layout Plan (ALP), this runway was rated for 17,000 pounds SW. The effective runway gradient is 0.92 percent sloping to the west.

TAXIWAYS

The existing taxiway system at Kingman Airport consists of parallel, partial parallel and runway exit taxiways of various lengths and widths. The parallel taxiway, which is 75 feet in width, extends for the full length of Runway 03-21, a distance of roughly 6,650 feet. Partial parallels support Runways 07-25 and 17-35 and are located along the approach ends of Runways 7 and 17. The partial parallel for Runway 07-25 is approximately 75 feet wide by 2,350 feet in length. The partial parallel for Runway 17-35 is approximately 75 feet in width by 2,850 feet in length. Several runway exit taxiways, varying in width from 75 to 150 feet, provide access to and from the runways. An additional taxiway, 75 feet wide by 2,800 feet long, connects the terminal with the approach ends of Runways 07 and 35.

LIGHTING

A variety of lighting aids are available at Kingman Airport to facilitate identification, landing, and taxiing operations at night and in adverse weather conditions. These systems, categorized by function, are described below.

Identification Lighting

The location and presence of an airport at night is universally indicated by an airport beacon. At Kingman Airport, the beacon is located in the terminal area, on the top of a building occupied by P.P. Aircraft Refinishing, which is west of the terminal building. This rotating beacon is equipped with an optical system that projects two beams of light, one green and one white.

Runway and Taxiway Lighting

Runway 03-21 and 17-35 are equipped with Medium Intensity Runway Lights (MIRL), which provide an outline of the runway. Medium Intensity Taxiway Lighting (MITL) has been installed on some of the runway exit taxiways and on one side of the parallel taxiway for Runway 03-21. Runway threshold lights are provided to positively locate the threshold of a runway. Runway threshold lights are installed on all the active runways.

NAVIGATIONAL AIDS

Ground-based electronic navigational aids that are located on or near Kingman Airport may be classified functionally as enroute navigational aids, terminal area navigational aids, and landing aids.

Enroute Air Navigation Aids

Enroute air navigation facilities permit aircraft to navigate accurately from point to point. When these facilities are located on an airport, aircraft may navigate directly to that airport. Kingman Airport is served by a Very High Frequency Omnidirectional Range/Distance Measuring Equipment (VOR/DME) facility which is located on the airport. This navigational aid incorporates the VOR and DME function into a single channelized VHF/UHF system. Operating in conjunction with the ground station, a properly equipped aircraft is able to translate the VORTAC signals into a visual display of both azimuth and distance. The VOR facility operates on 108.8 MHz and the DME

operates on Channel 25. The VOR/DME is located east of the intersection of Runways 17-35 and 03-21.

The Needles VORTAC, located approximately 48 air miles southwest of the airport, and Peach Springs VORTAC, located 35 air miles to the northeast, are used as enroute navaids. These navaids will be used by pilots primarily to navigate to the Kingman Airport. Upon receiving signals from the Kingman VOR/DME and receipt of clearance from air traffic control, the pilot may execute an instrument approach to the airport.

Terminal Area Navigational and Landing Aids

A number of navigational aids (navaids) that assist in landings and takeoffs are located both on and off the airfield. The Kingman VOR/DME is used as the primary navaid to define the non-precision, straight-in approach to Runway 21, and a non-precision circling approach to all other runway ends.

Runways 17 and 35 are equipped with Precision Approach Path Indicators (PAPI). PAPI is a system of lights located near the runway end which provides visual descent guidance information during an approach to the runway in relatively good weather conditions. Runways 03 and 21 are equipped with Visual Approach Slope Indicators (VASI), the predecessor to the PAPI system.

According to Instrument Flight Rules (IFR), when weather conditions are such that the base of the cloud layer is 1,000 feet or less and/or ground visibility is less than three miles, pilots are required to fly their aircraft using cockpit instruments and ground navigational aids. All air carriers, military and many general aviation aircraft operate according to IFR rules regardless of weather conditions. At Kingman Airport a VOR/DME instrument approach is available for IFR flights.

EXISTING TERMINAL AREA FACILITIES

In addition to the airfield facilities at Kingman Airport, the landside facilities are also essential to airport operations. The various elements comprising the terminal area facilities are described below and depicted on **Exhibit 1D.**

AIRPORT ADMINISTRATION BUILDING

Airport administrative services are provided by Mohave County Airport Authority which maintains its main offices at Kingman Airport. This building on the airport houses both the Mohave County Airport Authority administration offices and the Aircraft Rescue and Firefighting Facilities (ARFF). In addition, this building houses the Unicom operator and serves as a base for airport maintenance personnel. This building is located approximately 300 feet north of the airport terminal building, with access off Flightline Drive.

TERMINAL BUILDING

The existing terminal area is located northwest of Runway 03-21, south of the existing midpoint of the runway. The building was originally constructed in 1957 and is approximately 2,640 square feet. The current occupants of the terminal building are Mesa Airlines, Budget Rent-A-Car and a small restaurant. The remaining area is dedicated to baggage claim, passenger lobby, restrooms and storage.

Vehicle parking for the terminal building serves the public, terminal area employees and rental car company. Parking area capacity is estimated at 34 short term, ten long term parking spaces, plus roughly ten spaces posted for rental cars. Originally constructed in 1965, this parking area is in

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Olympic Drive

INDUSTRIAL PARK

Mohave Airport Drive

Finance Way

Flightline Drive

Flightline Drive

BEACON

75'

490'

AIRCRAFT TIEDOWN AREA

FUEL ISLAND

AIRCRAFT TIEDOWN AREA

VASI

VASI

SEGMENTED CIRCLE

NORTH

0 500 1000

SCALE IN FEET

KINGMAN AIRPORT

LEGEND:

1. Airport Administration / ARFF
2. Terminal Building
3. Mohave County Sheriff's Dept. Hangar
4. Hangar
5. Air'Zona Hangar-FBO
6. Air'Zona Building
7. Kingman Aero Services Building
8. P.P. Aircraft Refinishing
9. Shade Hangars
10. Gene's Flying Service Hangar
11. T-hangars
12. Privately -owned Hangar
13. Hangar
14. Port-a-Ports
15. Ultralight Hangar
16. Hangar

Exhibit 1D
TERMINAL AREA FACILITIES

poor condition due to the age and decomposition of the asphalt material.

APRON AREA

The aircraft parking apron at Kingman Airport is located northwest of Runway 03-21, with portions adjacent to and west of Runway 17-35 and north of abandoned Runway 07-25. This apron area totals approximately 260,000 square yards (SY). According to a pavement evaluation completed by the FAA, most of this apron is rated for 30,000 pounds SWL, and 45,000 pounds DWL. According to this report, a portion of this apron, located adjacent to the terminal building, has been strengthened to 30,000 pounds SWL, 50,000 pounds DWL, and 80,000 pounds dual tandem loading (DTWL) .

The portion of apron adjacent to the terminal is primarily used for the enplaning and deplaning of passengers on Mesa Airlines. Mesa Airlines maintains one aircraft (Beechcraft 1300) at the airport each night, in the apron area reserved for their use. Other portions of the ramp are leased by the airport FBO and other aviation related tenants.

Much of the total apron area has been used at some point in the past for aircraft tiedown. At this time, designated public tiedown areas are associated with Air'Zona and Kingman Aero Services. Air'Zona, with just over nine acres of apron area as part of their lease, can currently accommodate approximately 100 aircraft. With a significantly smaller apron area as part of their lease, Kingman Aero Services currently has 36 tiedowns. Neither of these businesses charges a tiedown fee. P.P. Aircraft Refinishing temporarily holds aircraft on their apron area, however, this area is not available to the public for aircraft storage.

AIRCRAFT HANGARS AND SHADES

Aircraft hangars at the Kingman Airport include both conventional and T-hangars. A brief review of these facilities follows.

Conventional Hangars

- The first hangar on the north end of the field, which was built in the 1940's, is roughly 150 by 150 feet in size, and is constructed of wood. The condition of the building's exterior is poor, while the interior is good. The hangar is currently leased by the Mohave County Sheriff's office and Road Department. Because the Mohave County Road Department is in the process of vacating this hangar, the space not occupied by the Sheriff's office will soon be available for lease. This facility is owned by the City of Kingman and managed by the Mohave County Airport Authority.

- The second conventional hangar is roughly 150 by 200 feet in size, is also of wood construction and was built in the 1940's. This facility is in very poor condition. It is owned by the City of Kingman and is currently vacant.

- The third hangar structure was built in 1975 by Golden Pacific Airlines, on an old concrete slab. This hangar, with roughly 10,000 square feet of interior space, is now occupied by Air'Zona. The building, constructed of metal, is in very good condition. It is owned by the City.

- The fourth conventional hangar, also built in the 1940's of wood construction, is used for the painting or refinishing of aircraft. The space is not available for aircraft storage. This hangar is roughly 90 by 130 feet in size. The exterior of this building is in poor condition, while the interior is

in good condition. The building is leased from the City through the Airport Authority by a private company.

- Two smaller conventional hangars were built near the south end of the flightline in 1988 and 1989. Each of these hangars are roughly 50 by 70 feet in size, are constructed of metal and in very good condition. Both hangars are used for maintenance and are not generally used for aircraft storage. Both hangars are privately owned and are located on land leased from the City through the Airport Authority.

- Another 1940's wood hangar, sometimes referred to as the Bebair hangar, is also owned by the Airport Authority. This building, is not occupied, is in very poor condition and has been planned for demolition.

- The last conventional style hangar on the flightline is used for the storage of ultralight aircraft. The building is leased from the City through the Airport Authority and space within the hangar is sub-leased to various individuals for the aircraft storage.

T-Hangars, Shades and Port-a-Ports

- Ten shade hangars owned by the Airport Authority are located on the field, perpendicular to Runway 03-21, south of midfield. Together these hangars are approximately 40 by 225 feet. The hangars are leased to the public, and are currently at 100 percent occupancy.

- Ten, privately owned T-hangars are located on the field, parallel to Runway 03-21, south of the shade hangars. The overall dimension of this facility is roughly 50 by 250 feet. The hangars are leased to the public; all spaces are occupied and a waiting list has been formed.

- Two privately owned Port-a-Port units are also located on the airport, south of the ultralight hangar. Together, these two units provide capacity for two aircraft. Both units are occupied.

FUEL FACILITIES

Fueling facilities at the Kingman Airport that are available to the public are owned and operated by Air'Zona and Kingman Aero Services. Both fuel distributors pay a fuel flowage fee to the Mohave County Airport Authority. Air'Zona dispenses fuel primarily through a fuel island located on the aircraft apron, northeast of the terminal building. This fueling island consists of three underground storage tanks. These include a 10,000 gallon tank of 80/87 octane, one 10,000 gallon tank of 100LL, and one 12,000 gallon tank of Jet "A" fuel. According to an interview with Air'Zona personnel, these tanks were installed in 1973. In addition to the fuel island, Air'Zona operates one fueling truck, which holds 3,000 gallons of Jet "A" fuel. Air'Zona is regularly open to the public from 8:00 a.m. to 5:00 p.m. daily, and provides on-call services.

Kingman Aero Services dispenses fuel entirely by truck. They currently use one 650 gallon and two 1,200 gallon trucks of 100LL, and one 2,000 and one 5,000 gallon trucks of Jet "A" fuel. Their storage facilities consist of four above ground fuel tanks: two 12,000 gallon tanks of 100LL and two 12,000 gallon tanks of Jet "A" fuel. The Kingman Aero Services tank area is located on the west side of Flightline Drive, north of their commercial building. Kingman Aero services are open to the public from 6:30 a.m. to 7:00 or sometimes 9:00 p.m. (dependent on demand), and is on-call at all other times.

GENERAL AVIATION FACILITIES AND AVIATION RELATED TENANTS

Several aviation related facilities and services are located along the aircraft apron area at the Kingman Airport. One business, Air'Zona, based on the services it provides, is considered a Fixed Base Operator (FBO) for the purposes of this study. In addition to this FBO, two other businesses provide aviation services: Kingman Aero Services and Gene's Flying Service. The owners of Gene's Flying Service intend to open for business in October of this year.

The following discussion describes airport tenants in order of their location from the northeast to the southwest ends of the apron. See **Exhibit 1D** for the specific location of these tenants. In addition, several vacant buildings are located on the airfield.

- The Mohave County Road Department is currently in the process of vacating the space they occupy in the large hangar on the far northeast end of the apron. This hangar space was used for the storage and maintenance of equipment, and the storage of petroleum products used for highway maintenance. Once they have vacated the property, this space will be available for lease.

  Currently sharing this hangar with the Road Department is the Sheriff's Department which houses two fixed wing aircraft used primarily for surveillance purposes and the transporting people. Plans are underway to build a new hangar facility for the Sheriff's Department, on the southern half of the apron.

- Air'Zona provides the most extensive aircraft services and facilities of the tenants at the Kingman Airport, selling fuel and oil, conducting aircraft maintenance (including avionics and engine maintenance), and providing aircraft tiedown and hangar space. In addition, Air'Zona is qualified to conduct flight instruction. Automobile parking facilities are available. No aircraft rental is provided at this time.

  The Air'Zona lease includes one large conventional hangar and attached office space, a small detached building and a mobile home. The mobile home is currently being used as a pilot lounge.

- Kingman Aero Services sells fuel, oil and incidental pilot supplies, and provides tiedown space on the apron area adjacent to their commercial building. Kingman Aero Services does not provide any form of aircraft maintenance, aircraft rental nor flight instruction. Automobile parking facilities are available.

- PP Aircraft Refinishing is located southwest of midfield. The business uses this large conventional hangar to refinish aircraft.

- Gene's Flying Service has executed a lease of property located south of the PP Aircraft Refinishing facility. One 50 by 70 foot conventional hangar was constructed on this property in December of 1989. The owners anticipate the start-up of their business in October of 1990 and intend to offer basic aircraft maintenance for fixed wing aircraft.

- WRRR T-hangars are located parallel to Runway 03-21, in close proximity to the bend in the aircraft apron on the southeast end. These T-hangars are leased to the public.

- The next structure, southwest of the WRRR T-hangars, is a privately-owned conventional hangar. This hangar is used for private maintenance activities.

  Three DC4's are based at the Kingman Airport in this area of the aircraft apron.

One of these is used as a slurry bomber, one is used for crop dusting and spraying activities, and the third is used for specialized cargo hauling.

- The last occupied building along the aircraft parking apron is an old Army airbase hangar which is leased for the storage of ultralight aircraft. Approximately 10 ultralights are currently based at this facility.

AIR TRAFFIC CONTROL AND AIRSPACE

AIRSPACE SETTING

A number of airports of various types and capacities are located in the vicinity of the Kingman Airport as illustrated on **Exhibit 1E**. **Table 1A** summarizes the major characteristics of the airports within 40 air miles of the airport. There are six private and two public airports in the area, with only one airport, Bullhead-Laughlin Airport, with a hard-surfaced runway.

The closest Commercial Service airports in the vicinity of Kingman Airport are Laughlin-Bullhead Airport, 36 air miles to the west, Lake Havasu Airport, 63 air miles to the southwest, Flagstaff Pulliam Airport, 112 air miles to the east, Prescott, Ernest A. Love Field, 83 miles to the southeast, and McCarran International Airport in Las Vegas, Nevada, the largest commercial service airport, approximately 82 air miles to the northwest.

TABLE 1A
Airports in the Kingman Area
Kingman Airport

Airport	Public/Private	Hard Surface	Elevation (Feet)	Runway Length (Feet)	Lighted	Air Miles [1] from Kingman
Bullhead/ Laughlin	Public	Yes	547	4,600	Yes	W/36
X-Bar One	Private	No	5,585	4,800	No	ENE/37
X-Bar One Lower	Private	No	3,710	4,200	No	ENE/16
Transwestern NR-1	Private	Yes	5,115	4,800	No	E/33
Ford Motor	Private	Yes	2,034	6,000	No	SSW/29
Air Ranch	Private	No	3,750	2,500	No	W/24
Sun Valley	Private	Yes	725	3,700	No	WSW/39

[1] W, NW, etc., indicate direction from Kingman Airport

The Kingman Airport does not currently have an air traffic control tower (ATCT) to regulate flight operations under Visual Flight Rules (VFR). Pilot advisories are provided through the use of a unicom system with a frequency of 122.8. The Mohave County Airport Authority operates the unicom system from 7:00 a.m. to 9:00 p.m., Mondays through Fridays, and 8:00 a.m. to 7:00 p.m. on Sundays. **Exhibit 1E** illustrates a variety of airspace uses surrounding Kingman Airport,

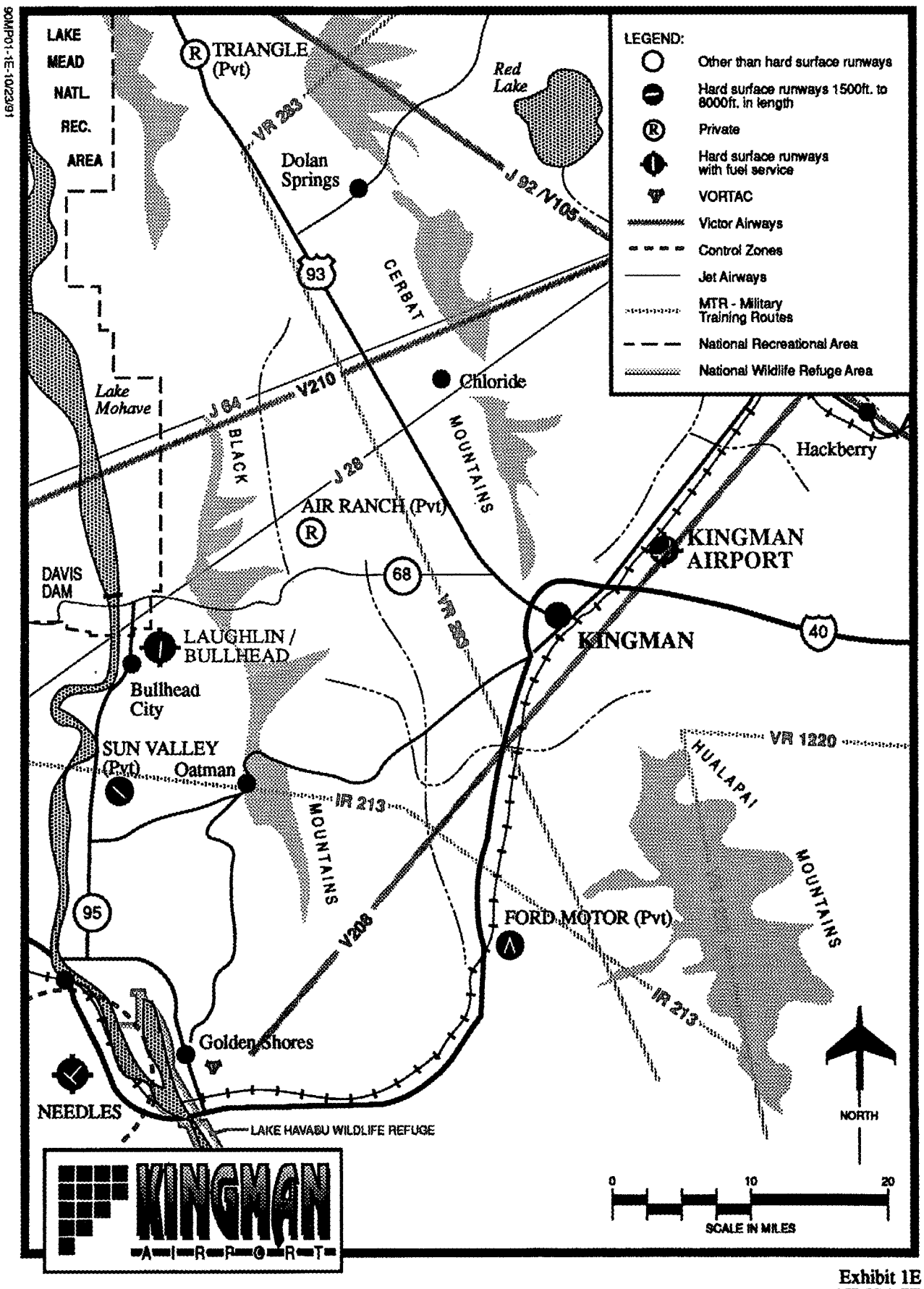

Exhibit 1E
AIRSPACE

which are discussed in the following paragraphs.

There are three types of airway route systems in the vicinity of Kingman Airport designed for air navigation purposes. Two of these systems, the *Airway System* (Victor Airways) and the *Jet Airway System*, rely upon navigational aids to describe the centerline of a course (airway) for an aircraft to follow on its intended route of flight.

The Airway System, an airway network between 1,200 feet Above Ground Level (AGL) and 18,000 feet Mean Sea Level (MSL), and the Jet Route System, from 18,000 feet to 45,000 feet MSL, provide the majority of routes traveled by aircraft in the United States. The navigational aids associated with these systems vary from *Tactical Air Navigation* (TACAN) equipment to VOR/DME, or a combination of facilities which determine distance as well as bearing information from a navigational station. Together these systems provide a major network of enroute navigational guidance for pilots traveling between destinations in the United States. Three Victor airways transect the Kingman airspace, V105, V208 and V210. The Jet Airways in close proximity to the airport include J28, J64, and J92.

Air traffic control service to Kingman Airport is provided by the Los Angeles Air Route Traffic Control Center (ARTCC) located in California, which provides radar approach and departure assistance to pilots at Kingman Airport operating on instrument flight plans. An additional air traffic service is also provided by the Prescott FSS. The FSS provides pilots with weather information, airport advisory service, flight plan processing, and communication with other air traffic control facilities through radio or telephone relay.

CONTROLLED AIRSPACE

Controlled airspace associated with Kingman Airport includes a *Transition Area*. Transition Areas are designated to contain Instrument Flight Rule operations in controlled airspace during portions of the terminal operation and while transitioning between the terminal and enroute environments. Transition Areas are controlled airspace extending upward from 700 feet or more above the surface when designated in conjunction with an airport for which an instrument approach procedure has been prescribed. This Transitional Area terminates at the base of the V208 above the airport. Pilots flying within this area of the airport may be subject to air traffic control. The transition area at Kingman Airport has a radius of five statute miles and extends to the northeast for approximately 20 miles to accommodate the non-precision instrument approach to the airport. A standard left traffic pattern has been established for each of the existing runways in operation at Kingman Airport.

SPECIAL USE AIRSPACE

Airspace may be reserved for use by a specific agency, primarily the military, within which operations of other aircraft are restricted or prohibited. The reserved airspace in the vicinity of the airport can be defined as follows.

- MILITARY OPERATIONS AREAS (MOA): Bagdad and Turtle MOA's are located to the south of Kingman Airport. The Bagdad MOA is under the control of Albuquerque ARTCC and military operations are authorized from 7,000 feet MSL or 5,000 feet AGL (whichever is higher) upward, with no upper limit. The Bagdad MOA is in affect Mondays through Fridays, 6:00 a.m. to 7:00 p.m. The Turtle MOA airspace is under the control of Los

Angeles ARTCC. Military operations are authorized in this airspace and may be conducted daily, 11,000 MSL and above, from 6:00 a.m. and 11:00 a.m., Mondays through Fridays. Civilian aircraft may transect the airspace within these MOA's at any time during VFR weather conditions.

- NATIONAL RECREATION AND WILDERNESS AREAS: There are two areas in the vicinity of the airport that are designated as National Recreation or Wilderness Areas.

  The Lake Meade Recreation Area, the larger of these, is located approximately 30 air miles west of the airport. The Lake Havasu Wilderness Area is located approximately 40 air miles southwest of Kingman. Aircraft in and over one of these designated areas are requested to remain above 2,000 feet AGL.

OTHER AIRSPACE AREAS

Another type of route affecting the airport is the *Military Training Route* (MTR). These are low altitude routes used by military aircraft to train pilots for various low level military missions. Low level MTR VR-283 is oriented in a northwest-southeast direction, approximately 15 miles west of the airport. Two other MTR's, VR-1220 and IR-213, are located between 12 to 15 miles southwest and southeast of the airport. These military training routes are designed for high speed, low altitude training for military aircraft during visual (VR-283 and VR-1220) or instrument weather conditions (IR-283). Pilots traveling through the MTR area should contact the Prescott Flight Service Station (FSS) to determine if these routes are being used.

AIRPORT SUPPORT FACILITIES

Airfield support facilities at Kingman Airport include the airport rescue and firefighting (ARFF) facility, airport maintenance, and airport utilities.

AIRPORT RESCUE AND FIREFIGHTING (ARFF) FACILITIES

Airport rescue and firefighting (ARFF) equipment maintained at the Kingman Airport includes one 1982 Dodge truck equipped with 100 pounds of foam, and 400 pounds of dry chemical fire suppressant. This ARFF facility is unmanned, however, in the case of an emergency, the on-duty airport maintenance employee is qualified to conduct rescue operations until relieved by personnel and equipment from the Hualapai Fire District. The District responds to these emergencies and completes the rescue and/or firefighting activities.

MAINTENANCE

Maintenance vehicles available on the Kingman Airport premises include one dump truck, one street sweeper, and one pickup truck. These three vehicles are stored outdoors, adjacent to and west of the building that houses the ARFF facilities and the Mohave County Airport Authority Administrative offices.

UTILITIES

Kingman Airport is served by both municipal and public utilities, listed as follows.

- Electrical power service is provided to the Kingman Airport and Industrial Park by the Citizen's Utilities Company.

- The area's natural gas distributor is Southern Union Gas Company. The supplier is El Paso Natural Gas Company.

- Water is provided to the Kingman Airport and Industrial Park by the City of Kingman municipal water system.

- Sanitary sewage treatment and disposal is provided by the Kingman municipal sewer system.

- Solid waste collection and disposal is provided by the City of Kingman for those areas within the Kingman City limits. Solid waste collection for the airport is provided by Mohave Disposal, a private company. The sanitary landfill is operated by Mohave County.

- Telephone service is provided by the Citizen's Utilities Rural Company.

AIRPORT OPERATIONS

As previously mentioned, commercial air service to Kingman was first established in the 1930's by Trans World Airlines. Since that time the airport has been served by numerous airlines with varying levels of service. Since airline deregulation in 1978, airline passenger enplanements have been erratic at Kingman, growing to a high of 5,000 in 1984 and then declining to less than 600 in 1988. In early 1988, Golden Pacific, the commuter airline that had provided service to the Kingman area since 1982, filed for bankruptcy and terminated service to the airport. Airline passenger service was temporarily suspended at the airport until Mesa Airlines began providing service in January 1990.

Mesa Airlines currently provides commercial air service at the Kingman Airport with 13-passenger, Beechcraft 1300 aircraft. This airline currently offers two daily direct, non-stop flights to Bullhead City, as well as one non-stop and two one-stop departures to Phoenix.

Since 1979, Kingman has been receiving federal subsidies under the Essential Air Service program established by the Airline Deregulation Act. Under this program, certain communities in the United States are guaranteed continued air service by the federal government through subsidies provided to airlines for maintaining a certain level of service to the community. Kingman is one of only two airports in the State that are currently receiving "essential air service" subsidies. Historical records of airport activity, including commercial enplanements and operations, are illustrated in **Table 1B.** The totals for 1990 are projections developed from data available for the first half of 1990. These projections were developed to use as a reference point for commercial service activities since no commuter service was conducted at the airport in 1989.

TABLE 1B
Historical Activity Statistics, 1979-1990
Kingman Airport

Year	Enplanements[1]	Operations [2]					
		Commuter	Air Taxi	G.A. Local	G.A. Itinerant	Military	Total
1979	384	NA	200	6,000	12,000	100	18,300
1980	456	NA	46	14,400	3,600	200	18,246
1981	724	1,400	200	14,400	5,000	200	21,200
1982	2,814	NA	NA	NA	NA	NA	NA
1983	2,954	NA	NA	NA	NA	NA	NA
1984	5,042	NA	NA	NA	NA	NA	NA
1985	3,199	6,000	1,040	15,000	6,000	1,500	29,540
1986	2,898	NA	NA	NA	NA	NA	NA
1987	3,106	6,700	1,100	16,000	6,700	1,500	32,000
1988	595	5,500	1,560	17,000	7,000	2,000	33,060
1989	0	0	1,600	6,138	15,268	583	23,588
1990[3]	2,700	1,814	1,600	6,614	16,340	653	27,021

G.A. = General Aviation
[1] Source: FAA Airport Activity Statistics - Certified Route Air Carriers.
[2] Source: FAA Form 5010's 1979 - 1988; Estimated from Unicom records for 1989.
[3] Source: Estimated total based on partial year data including Unicom records.

TRANSPORTATION NETWORK

REGIONAL HIGHWAY SYSTEM

The City of Kingman is located at the junction of several federal and state highways, which provide connection to the major economic centers in Arizona as well as other adjacent states. Interstate 40 (I-40), which stretches from coast to coast, connects Kingman with the City of Los Angeles, California, 330 miles to the west, and the City of Albuquerque, New Mexico, 480 miles to the east. I-40 also provides access to the nearby Arizona cities of Williams and Flagstaff. United States Highway 93 (US 93) provides highway access to Las Vegas, Nevada, 101 miles to the north, and to Phoenix, Arizona, 186 miles to the south.

State highways include State Route 66 (SR 66) and SR 68. SR 66 provides access to the Kingman Airport; SR 68 provides access to Bullhead City, Arizona and Laughlin, Nevada.

AIRPORT ACCESS AND INTERNAL CIRCULATION

The single existing access road to the Kingman Airport and Industrial Park is State Route (SR) 66. A two-lane paved roadway, Industrial Parkway, currently provides the only access off SR 66. Industrial Parkway has a grade-separated crossing (underpass) of the Atchison Topeka and the Sante Fe Railroad. The railroad bridge is a wooden pile trestle structure built in 1944.

Industrial Parkway connects with Industrial Boulevard, which connects with Mohave Airport Drive. From this point, Mohave Airport Drive provides access through the industrial park, directly to Flightline Drive and the terminal area. Flightline Drive is a designated taxilane and situated parallel to and northwest of Runway 03-21, providing access to the Industrial Park from the airport property. This road also provides access to the Mohave County Airport Authority administrative offices, Air'Zona (the airport's Fixed Base Operator, FBO), and a number of

aviation related businesses located on the flightline and along the southeast edge of the Industrial Park.

These roadways comprise the only access to the Kingman Airport and Industrial Park for airport employees and users, as well as for the 1,200 people that currently work in the Industrial Park. An engineering study was completed in February of 1990 to access the feasibility for constructing new or additional access. Current plans are to construct a new access road off of SR 66 on the alignment of Mohave Airport Drive, with a new grade-separated crossing of the railroad by means of an underpass. A road on the alignment would provide more direct access to the airport facilities.

PUBLIC TRANSPORTATION

No public surface transportation services are currently available to serve the Kingman Airport except for taxi service. Privately owned and operated taxi service is available on a 24-hour basis. Rental cars can also be obtained from the rental car agency located in the terminal building.

LAND OWNERSHIP AND JURISDICTIONAL AUTHORITY

The Army Airfield of Kingman became the property of Mohave County in 1948. In 1979, the Mohave County Airport Authority was established as an independent agency to operate the Kingman and Bullhead City Airports. In 1988, Mohave County sold the property to the City of Kingman, which owns the property to this date.

Originally, the airport property consisted of 4,500 acres. Of this 4,500 acres, 1,100 acres have been released for the development of an industrial park and the sale of individual plots. While this 1,100 acre area is no longer considered airport property, terms of the release specify that within five years of each land sale, the value of the proceeds must be returned to the airport in the form of capital improvements. This funding is used to meet federal dollar obligations on qualifying airport development projects. The Mohave County Airport Authority maintains a lease from the City on all properties that have not been sold.

The land included within the airport property, as well as the Airport Industrial Park, is currently within the jurisdiction of Mohave County. The City intends to annex this property in the future, and is presently pursuing annexation of property between the current City limits and the airport. It is currently anticipated that annexation of the airport property will not be accomplished for three to five years.

AREA LAND USE

The majority of land adjacent to the airport/industrial park property to the north, east and south is currently undeveloped, and is either vacant or used for livestock grazing. The closest residential development is located on the west side of SR 66, west and southwest of the airport. A mixture of industrial and commercial land uses line both sides of this highway, primarily concentrated in an area southwest of the airport.

Exhibit 1F depicts the generalized existing land use for the area surrounding the airport. For the purposes of this map, land use types considered to have relatively the same sensitivity to airport operations and airport noise were grouped into one category.

KINGMAN AIRPORT INDUSTRIAL PARK

The Kingman area is a prime location for industries, due to favorable Arizona taxes, Interstate Highway 40, the Santa Fe mainline

and proximity to the California market. Offering reasonable land costs, the park is attracting the interest of manufacturers and other businesses that wish to serve the western states.

To date, the Kingman Airport Industrial Park consists of 1,100 acres of land. It is anticipated that additional property that is not needed for airport operations and facilities, could be released at some point in the future for industrial/commercial development.

The Kingman Airport Industrial Park is located west of the airport property. It includes a full development infrastructure of plotted parcels, roads, water and electric. The industrial park is bounded on the west by the main line of the Santa Fe Railroad with access to the Santa Fe Railroad from a number of the parcels. The park currently supports a variety of industrial and commercial businesses, and in total employees approximately 1,200 people. Names of the existing businesses are provided below.

- American Woodmark Corporation
- Aquarium Decor
- Bayliner Marine Corporation
- Brackett Aircraft Company, Inc.
- B & R Pipe Fabrication
- Fiesta Labels
- Frontier Freightways
- General Cable Corporation
- Kingman Investment Properties
- Kolcorp Construction, Inc.
- Laron Engineering
- Union Carbide-Linde Division
- Lomanco West
- R.L. Montgomery Company
- NIBCO
- Potters Industries, Inc.
- Tucker Housewares
- WENCO of Arizona

SOCIOECONOMIC DATA

A variety of historical and forecast information related to the Kingman area will be used in various elements of the Master Plan process. Analysis of these data will be made in subsequent chapters. Population growth trends and economic base of the community are the most important factors to consider in forecasting airport activity.

Quantities of aviation related activity, such as the number of based aircraft, aircraft operations, passenger enplanements, etc., are influenced by local population. For this reason, the historical demographics of the City of Kingman, Mohave County and the State of Arizona will be examined and used in aviation forecasting.

POPULATION

Historical population figures for the City of Kingman, Mohave County and the State of Arizona are presented in **Table 1D.** A review of these data indicates steady growth for each geographical area from 1960 to the present. The percentage change in population growth for the City of Kingman from 1980 to 1989 reflected roughly a 38 percent increase, approximately the same as that of the State as a whole (35 percent). This percent change, however, was somewhat lower than that of Mohave County, which represented an increase of 66 percent.

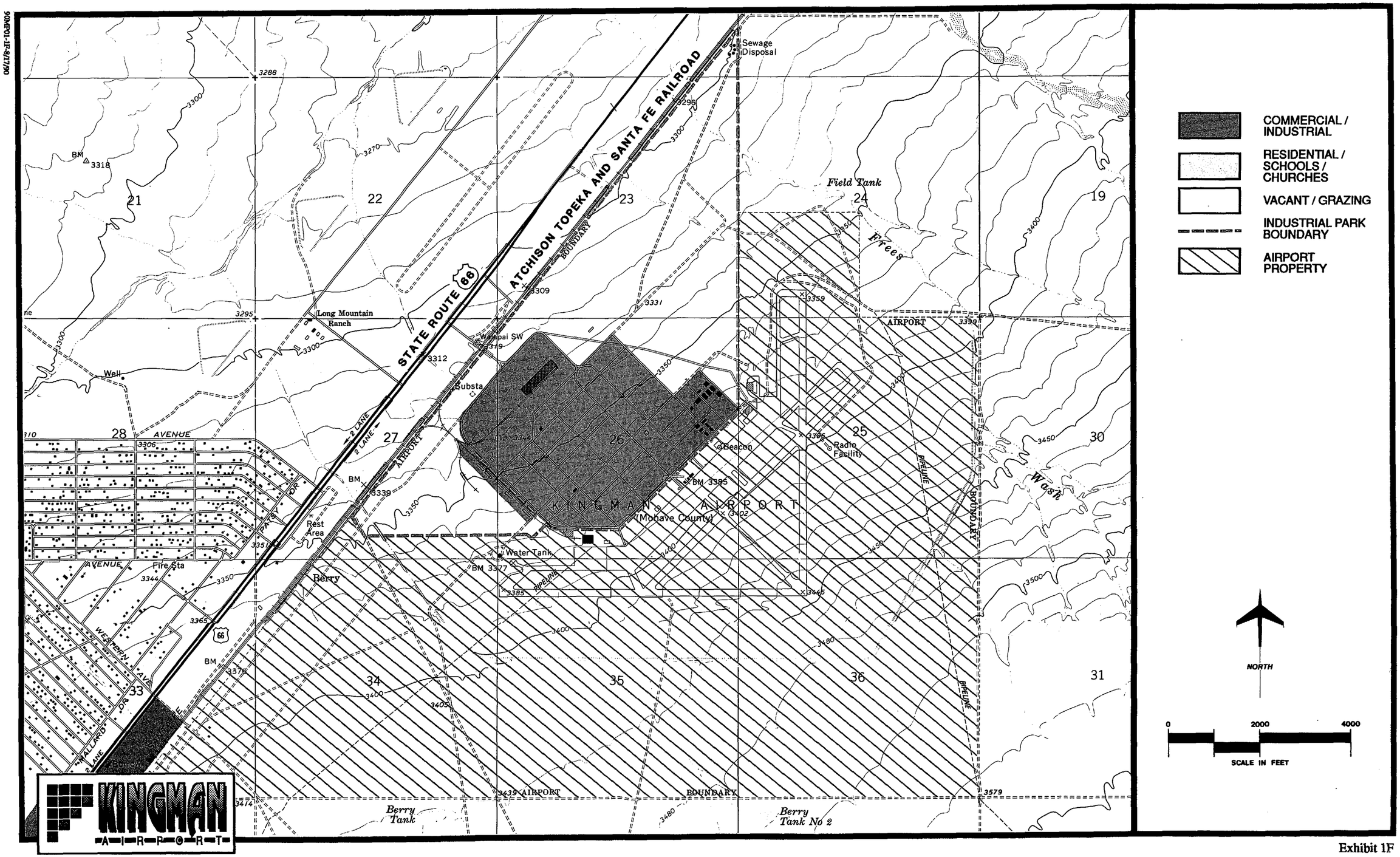

Exhibit 1F

GENERALIZED LAND USE

TABLE 1D
Historical Population

Year	State of Arizona	Mohave County	City of Kingman
1960[1]	1,302,161	7,736	4,525
1965[1]	1,584,000	15,100	6,021
1970[1]	1,775,399	28,857	7,312
1975[1]	2,285,600	39,400	7,397
1980[1]	2,716,546	55,865	9,257
1985[2]	3,181,400	71,700	10,535
1989[2]	3,654,700	92,500	12,795

[1] Source: Demographic Guide to Arizona, Arizona Department of Economic Security, 1986.
[2] Source: Arizona Revised Population Estimates: 1981-1989 and Population Projections: 1989-2040, Arizona Department of Economic Security, Research Administration, Population Statistics Unit, May 1990.

Population projections provided by the Arizona Department of Economic Security, Populations Statistics Unit, indicate an anticipated increase in population for the City, County and State over the next twenty years. For the City of Kingman, these projections indicate an anticipated growth in population to 24,015 people by the year 2010, representing an 85 percent increase over the 20 year period. This percentage increase is approximately equal to the overall change in population forecasted for Mohave County, and significantly higher than the 60 percent increase projected for the State as a whole. **Table 1E** presents the population projections for the State, the County and the City of Kingman for the years 1990 to 2010.

TABLE 1E
Population Projections

Year	State of Arizona[1]	Mohave County[2]	City of Kingman[2]
1990	3,714,300	90,300	12,960
1995	4,209,900	107,300	15,405
2000	4,800,650	126,600	18,175
2005	5,350,100	146,400	21,015
2010	5,940,250	167,300	24,015

[1] Source: Mountain West Research, June 6, 1989.
[2] Source: Arizona Department of Economic Security, Population Statistics Unit, February 1990.

EMPLOYMENT STRUCTURE

Table 1F presents Kingman area employment by sector. The Wholesale and Retail Trade sector represents the largest employment category in the Kingman area at roughly 28 percent of total employment. The second and third largest employment sectors respectively are Services at 23 percent, and Public Administration at 18 percent of the total. Manufacturing accounts for just over 13 percent of total employment.

TABLE 1F
Kingman Area Employment Structure

	Percent of Total
Mining	1.5%
Construction	7.3
Manufacturing	13.4
Transportation, Communication & Public Utilities	5.4
Wholesale & Retail Trade	27.8
Finance, Insurance & Real Estate	4.5
Services	22.6
Public Administration	17.5

Source: Arizona Department of Economic Security and Local sources, 1982, estimates revised 1988.

SUMMARY

The information in this chapter provides a foundation for the remaining elements of the master planning process. Information on current facilities and utilization will serve as a basis, with additional analyses and data collection, for the development of forecasts of aviation activity. This inventory is the first step in the process of determining the future facilities required to meet the projected aviation demand of the community.